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Abstract
Soybean rust is starting to catch the attention of plant pathologists this year. If you peruse the USDA ipmPIPE Soybean Rust Web site, the distribution of soybean rust may not appear much different than in years past. Like before, soybean rust has survived the winter in the South on kudzu, this year in Alabama, Florida, Georgia and Louisiana. Soybean rust also was reported in five municipalities in Mexico in January, but these have been destroyed or are no longer active, so there is currently no known soybean rust in Mexico.

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Soybean Rust Stirring in the South

By Daren Mueller, Department of Plant Pathology

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Different soybean rust patterns this year
If you dig deeper into the information on the ipmPIPE Web site, details reveal two emerging differences. First, soybean rust has been reported on soybean in sentinel plots in Alabama and Louisiana. Both reports are several weeks ahead of previous first finds on soybean in each state. Second, unlike the past few years, there has been ample rain for soybean rust to increase inoculum (spores). Many of the plant pathologists in these southern states anticipate soybean rust to show up in new places because of these ideal weather conditions.

What does this mean for Iowa? It is still too early to tell, but these developments are certainly catching our attention. A few years ago we made a checklist of factors that could lead soybean rust to cause yield losses in Iowa. These included:

- Successful rust overwintering in the South
- Buildup of inoculum early in the spring in the South
- Spread of inoculum to locations that can serve as a springboard for rust to get to Iowa (Arkansas, Texas, Missouri, Oklahoma)
- Spores are carried up to Iowa – preferably under heavy cloud cover (as spores are sensitive to light)
- Spores arrive in Iowa when soybean crop is before R5-R6 and when weather conditions are conducive for soybean rust infection

Since soybean rust was discovered in the United States, it has rarely passed the first checkpoint. Mostly because of dry weather, soybean rust never has established itself early in the spring. In fact, most seasons have not seen soybean rust spread until late in the season (typically after August).
Figure 1. Current distribution of soybean rust in 2009 (last updated June 12, 2009) (Access most recent map at http://sbr.ipmPIPE.org/cgi-bin/sbr/public.cgi)

Spore movement forecast
According to Iowa State University and St. Louis University’s soybean rust spore movement predictive model, spore dispersal has been limited to the far southern United States, but has increased recently as the sources of inoculums have increased. For now, even with the predicted increased spore movement, the chances of spores getting to Iowa in the next month is very low because there are no strong sources of inoculum in Arkansas, Oklahoma, Texas or Mexico.

ISU Soybean Rust Web Site
A quick reminder that the Iowa State University Soybean Rust Web site was redesigned in 2008. The new site highlights weekly messages written throughout the growing season that provide up-to-date information on soybean rust. Individuals can sign up on the site to have these reports e-mailed to them. The Web site also provides the basics on management of soybean rust, as well as fast facts about soybean rust.

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